

WHAT IS CLAIMED IS:

- 42/49
1. A security gate assembly comprising:
- an elongate gate arm movable along a defined pathway of travel;
- 5 3 a DC motor having an output disposed to provide a torque upon (the receipt) of a first series of output pulses;
- a linkage mechanism attached to one end of said gate arm and to the DC motor output and disposed to cause rotation of the gate arm in accordance with the DC motor output; and
- 10 an adaptive control circuit disposed to monitor a plurality of operating conditions and to provide said first output pulses to said DC motor in response to the plurality of operating conditions.
2. The invention as in claim 1 wherein the adaptive control circuit is further disposed to provide second output pulses to cause counter-rotation of the
- 15 gate arm.
3. The invention as in claim 1 wherein the adaptive control circuit is operable to develop a signal indicative of the position of the gate arm and to vary the first output signals in accordance with (the developed ^{NWD} signal).
4. The invention as in claim 3 wherein (the position ^{NWS} signal) is developed
- 20 by counting output pulses of the DC gear motor.
5. The invention as in claim 3 wherein the adaptive control circuit is further operable to receive data to provide the first output signals based on the weight of the gate arm.

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(said gate arm subassembly)

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system includes a motor controller object.

12. An object-oriented control system implementing a control program

a motor controller object implementing methods and data associated with a

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a device handler object implementing methods data associated with input and output functions; and

a messaging object for permitting messages to be passed between the motor controller object and the device handler object.

5 13. The invention as in claim 12 wherein the motor controller object accesses one of a plurality of output voltage profiles for actuating the gate arm.

14. A linkage assembly for coupling a gate arm with an actuating motor comprising:

a reduction gear mechanism coupled with the actuating motor output;

10 a first link piece connected with the reduction gear mechanism;

a main crank shaft operably connected with the gate arm having an axis of rotation spaced from the output axis of rotation, the main crank shaft moving between a first position and a second position; and

15 a second link piece operably connecting the first link piece with the crank shaft, the linkage assembly rotating the main crank at a variable angular speed between the first position and the second position.

15. The invention as in claim 15 wherein the main crank passes through a centerline of the gate arm to permit connection in either a right-hand orientation or a left-hand orientation.